

REMARKS

In the Office Action, the Examiner rejected claims 22, 24-33, 35, and 37-46 under 35 U.S.C § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject matter which applicant regards as the invention. The Examiner also rejected claims 21-27, 31, 33-40, 44 and 46 under 35 U.S.C § 102(e) as being anticipated by US Patent 7,065,729 to Chapman (“Chapman”). In this Amendment, Applicants have amended claims 21, 22, 24-26, 28-30, 32, 34, 35, 37-39, 41-43, and 45. Applicants have also added claims 47 and 48. Accordingly, claims 21-48 will be pending after entry of this amendment.

I. Rejections of claims 22, 24-33, 35, and 37-46 under 35 U.S.C § 112, Second Paragraph

In the Office Action, the Examiner rejected claims 22, 24-33, 35, and 37-46 under §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject matter which applicant regards as the invention. Specifically, the examiner cited insufficient antecedent basis for the words “item’s” and “item”. Applicants have amended these claims to correct the antecedent basis. For instance, Applicants have replaced the word “item” with “previously defined geometry”. Also, Applicants have deleted the word “item’s”.

II. Rejection of claims 21-27, 31 and 33 under 35 U.S.C § 102(e)

In the Office Action, the Examiner rejected claims 21-27, 31 and 33 under §102(e) as being anticipated by Chapman. Claims 22-27, 31 and 33 are dependent directly or indirectly on claim 21.

Claim 21 recites a method of defining a route for a net in a design layout that has multiple routing layers, where the route has a plurality of segments, and where a set of at least two routing directions are available for routes on a particular layer. The method includes for each of at least two available routing directions on a particular layer, defining a bloated region about a

previously defined geometry on the particular layer, where the bloated regions for at least two different routing directions are different. The method includes defining the route for the net by using at least one bloated region for a particular routing direction to determine the portion of the particular layer that is not available for route segments along the particular routing direction.

Applicants respectfully submit that Chapman does not disclose, teach, or even suggest such a method. For instance, Chapman does not show at least two different regions for at least two routing directions on a particular layer. Instead, Chapman shows the same routing strategies for all directions on a particular layer. *See* e.g., Chapman, column 12, lines 12-37.

The Examiner cites Chapman's Abstract, Column 4 lines 33-53, column 7 lines 13-20 and Figures 6A-6B as discussing and illustrating a bloated region about a previously defined geometry where the bloated region is different for at least two different routing directions. Applicants respectfully submit that these sections of Chapman do not disclose, teach or even suggest a method that uses at least two different regions for at least two different routing directions.

Accordingly, Applicants respectfully submit that Chapman does not render claim 21 unpatentable. As claims 22-27, 31 and 33 are dependent directly or indirectly on claim 21, Applicants respectfully submit that claims 22-27, 31 and 33 are patentable for at least the reasons that were discussed above in relation to claim 21. Amendments to this claim are done for reasons of clarity, not for reasons of patentability. Applicants do not surrender any equivalents to any amended limitation.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §102(e) rejection of claims 21-27, 31 and 33.

III. Rejection of claims 34-40, 44 and 46 under 35 U.S.C § 102(e)

In the Office Action, the Examiner rejected claims 34-40, 44 and 46 under §102(e) as being anticipated by Chapman. Claims 35-40, 44 and 46 are dependent directly or indirectly on claim 34.

Claim 34 recites a computer readable medium that stores a computer program for defining a route for a net in a design layout that has multiple routing layers, where the route has a plurality of segments, and where a set of at least two routing directions are available for routes on a particular layer. The computer program includes sets of instructions for defining, for each of at least two available routing directions on a particular layer, a bloated region about a previously defined geometry on the particular layer, where the bloated regions for at least two different routing directions are different. The computer program includes defining the route for the net by using at least one bloated region for a particular routing direction to determine the portion of the particular layer that is not available for route segments along the particular routing direction.

Applicants respectfully submit that Chapman does not disclose, teach, or even suggest such a program. For instance, Chapman does not show at least two different regions for at least two routing directions on a particular layer. Instead, Chapman shows the same routing strategies for all directions on a particular layer. *See* e.g., Chapman, column 12, lines 12-37.

The Examiner cites Chapman's Abstract, Column 4 lines 33-53, column 7 lines 13-20 and Figures 6A-6B as discussing and illustrating a bloated region about a previously defined geometry where the bloated region is different for at least two different routing directions. Applicants respectfully submit that these sections of Chapman do not disclose, teach or even suggest a program that uses at least two different regions for at least two different routing directions.

Accordingly, Applicants respectfully submit that Chapman does not render claim 34 unpatentable. As claims 35-40, 44 and 46 are dependent directly or indirectly on claim 34, Applicants respectfully submit that claims 35-40, 44 and 46 are patentable for at least the reasons that were discussed above in relation to claim 34. Amendments to this claim are done for reasons of clarity, not for reasons of patentability. Applicants do not surrender any equivalents to any amended limitation.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §102(e) rejection of claims 34-40, 44 and 46.

IV. New Claims 47 and 48

In this Amendment, Applicants have added claims 47-48. Claim 47 is dependent on claim 21. Claim 47 recites that for each particular routing direction, the bloated region of the previously defined geometry defines a region in which the route cannot be defined along the particular routing direction. Applicants respectfully submit that Chapman does not specify a region that a route can not enter along a particular routing direction. Chapman's alleged bloated region specifies an area within which the route has to go (i.e., the route cannot not go outside of this region). *See* e.g., Chapman column 12 line 65-column 13 line 22. Accordingly, Applicants respectfully submit that in Chapman the alleged bloated region is not a bloated region that specifies a region that the route can not enter along a particular direction. Hence, Applicants respectfully submit that Claim 47 is patentable over Chapman for this reason in addition to the reasons recited above for Claim 21.

Claim 48 is similar to Claim 47, except that it is a computer readable medium claim that is dependent on claim 34. Accordingly, Applicants respectfully submit Claim 48 is patentable over Chapman for the same reasons as Claim 47.

V. Allowable Claims 28-30, 32, 41-43 and 45

In the Office Action, the Examiner objected to claims 28-30, 32, 41-43 and 45 as being dependent on a rejected base claim. The Examiner stated that claims 28-30, 32, 41-43 and 45 would be allowable if rewritten to overcome the §112 second paragraph rejection and if rewritten in independent form. Applicants respectfully thank the Examiner for the allowance. However, Applicants respectfully have not rewritten any of these claims in independent form since Applicants respectfully believe that the rejected independent claims 21 and 34 are patentable over the cited reference.

In view of the foregoing, Applicants respectfully request reconsideration of allowable dependent claims 28-30, 32, 41-43 and 45.

CONCLUSION

In view of the foregoing, it is submitted that all the pending claims, namely claims 21-46 are in condition for allowance. Reconsideration of the rejections is requested. Allowance is earnestly solicited at the earliest possible date.

Applicants believe that no fee is due for this amendment because Applicants have already paid for claims 1-20, which were canceled in response to a restriction requirement. However, if there is a fee is due, the Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this transmittal and associated documents, or to credit any overpayment to **Deposit Account No. 50-3804.**

Respectfully submitted,

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